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THE AMERICAN PSYCHOLOGIST

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THE PSYCHOLOGICAL AND SOCIAL SCIENCES IN THE NATIONAL MILITARY ESTABLISHMENT¹

LYLE H. LANIER²

New York University

INTRODUCTION

THE aftermath of World War II for psychology has been recorded in considerable detail in the pages of this journal. Perhaps the major story has been the migration of psychologists from military agencies into civilian life—along with the exceptional instances of individuals who chose to remain in a military department or even to return after a period of separation. Numerous accounts of the wartime activities of military psychological agencies have appeared, together with occasional notes on their postwar organization and current activities. Certain agencies have announced psychological research programs involving large appropriations for contracts with universities and other civilian organizations—a continuation of the wartime pattern of OSRD-NDRC. And new military agencies have arisen to consolidate the wartime experience and to extend the scope of investigation in psychology and related sciences. In many ways, the biggest psychological news story in the post-war period has been the program in clinical psychology conducted by the Veterans Administration—a grim reminder of the human costs of war and a symbol of social change in the profession, the significance of which psychologists will debate for years to come. The record shows further that a Division of Military Psychology has been established in the American

Psychological Association and that this Division commands the active support of a considerable number of psychologists in a variety of fields. Finally, there has been some controversy concerning the professional status of psychology in a military establishment (4, 6, 7) and the "frustration" of government scientists in general (1, 5).

Several issues of far-reaching importance to psychology and allied sciences underlie this process of reconversion to a peacetime pattern of scientific activity. The occasionally paradoxical trends and the conflicting attitudes suggest the need for clarification of the general issues involved and for an evaluation of their implications for the future development of the sciences of man. The present article will consider these issues, in the course of an examination of the nature and status of these sciences in the National Military Establishment. Such an analysis should also have a bearing upon the problem of large-scale, "institutionalized" science in general. Psychologists, along with other scientists and technologists, will need to give increasing attention to this problem if they are to discharge their social responsibilities, including the obligation to maintain a high level of productive, fundamental research. The writer believes that the latter objective is compatible with the organization of facilities and personnel for large-scale cooperative research. In fact, it is likely that effective basic research in many areas of psychology and the social sciences can only be done by organized research teams, often of interdisciplinary character. A similar view was expressed in Marquis' recent presidential address (3) on the problem of research planning at the frontiers of science.

Undoubtedly serious difficulties for science, and hence for society, will attend the expansion of the social pattern of organized, "collective" research. The "dead hand of bureaucracy" is no myth, and in a most important sense it is a contradiction in terms to speak of "planning" a scientific discovery. But it

¹ At its final meeting the Emergency Committee in Psychology of the National Research Council recommended that the *American Psychologist* publish an account of post-war organization of psychological research in the military services. When Lyle Lanier became Executive Director of the Committee on Human Resources I asked him to write this account. —Dael Wolfe.

² During the year 1947–1948 the author served as Executive Director of the Committee on Human Resources of the Research and Development Board. Although this article is based mainly upon this experience, the writer is solely responsible for the information and opinions presented. This article was approved for publication in the *American Psychologist* by the Office of Public Information, Office of the Secretary of Defense, March 17, 1949.

remains to be demonstrated that a collective pattern of research organization is incompatible with original scientific thinking or with effective scientific action. There are many moot questions concerning the sociology and underlying dynamics of scientific knowledge which must be answered before one can speak confidently about the conditions requisite to creative scientific advance. But it is not unreasonable to suggest that the deficiencies of the sciences of man, in the face of their most pressing problems, may be due partly to inadequacies in the pattern of scientific attack upon these issues. Organized, collective research may be increasingly necessary if the more complex problems of human behavior are to be solved.

Many psychologists who might grant the abstract validity of these considerations would nevertheless question their applicability to a military institution. They would point out that its authoritarian character often adds special complications to the usual hazards of bureaucracy, and that the stress upon technology and development tends to swamp basic research. Remembering their experiences in World War II, psychologists will think of the handicap of unsatisfactory professional status in military departments, the undue restriction upon the range of problems open to investigation, and the subordination of research to the demands of training and operations. And especially they resent the practice of having scientific work approved or "cleared" by non-professional military personnel who know little about it (6).

These conditions are real enough, although they are not entirely restricted to the military establishment. Applied scientists in any field may have similar difficulties. Furthermore, the situation in the military establishment is far from invariant; it has changed considerably since the war in many agencies, and in the human sciences especially there are increasing signs of improvement in the overall professional situation. For one thing there is growing interest in the sciences of man, perhaps as a consequence of the fact that advances in physical science and technology have created problems which can only be solved, if at all, through commensurate advances in the psychological and social sciences. The study of the psychological characteristics of the operators of military machines, for example, becomes imperative as their human requirements approach the limits of man's capabilities. In another area, the occupational and organizational complexity of a

modern military institution forces increased attention to systematic procedures in the selection, training, and utilization of manpower. And the difficult problems of leadership and morale can only be solved through intensive research in psychology, social anthropology, and sociology. Even in such fields as intelligence and strategic planning the need for systematic inquiry is becoming more acute and more clearly perceived.

These problems require planning and research on a scale hitherto unknown to psychologists and social scientists. They are important problems, whether judged in terms of economy to the taxpayer, relation to national security, or opportunity for large-scale investigation. The responsibility for this work rests both upon the military establishment and upon the professional groups in question. Whatever qualms the latter might feel concerning bureaucratic control, "planned" science, or professional status, they cannot escape the responsibility for evaluating these national needs and for determining what steps might be taken to meet them. Even professional self-interest would dictate that systematic consideration be given to the possibilities for pioneering research in many fields which seem to be emerging in the military establishment. If conditions are unfavorable for satisfactory research, steps should be taken by professional groups to assist in improving them. If the supply of professional personnel is inadequate to meet the new demands, while sustaining existing activities, the comparative merits of the old and the new should be weighed and a balance struck. The Veterans Administration has shown that the supply of trained manpower does not follow "laissez faire" principles.

In order to make responsible judgments concerning these issues, it is necessary to know the relevant facts. The general purpose of this article is mainly to provide such facts about psychology and related sciences in the National Military Establishment. Some attention will also be given to trends and possibilities. These major topics will be considered:

1. The organizational structure of the National Military Establishment, with special reference to the Research and Development Board and its relationship to the military departments.
2. The nature and functions of the Committee on Human Resources (an agency of the Research and Development Board concerned with problems in the psychological and social sciences).

3. The organization of research agencies within each of the three military departments.

4. The research and development programs of the three departments.

5. The problem of scientific and technical personnel in the military departments, in relation to the general shortage of research personnel.

6. The relationship of the military agencies to the research of non-military organizations.

7. The general implications of the military re-

search agencies are shown in Figure 1. Inasmuch as an increasing number of psychologists are becoming involved in the operations of many of these organizations, a brief account of their major functions seems in order. Many of the newer agencies have yet to achieve a full measure of effectiveness. But significant changes have occurred, some of which may well affect the future course of the sciences of man. To understand these developments it is necessary to study the institutional structure which underlies them.

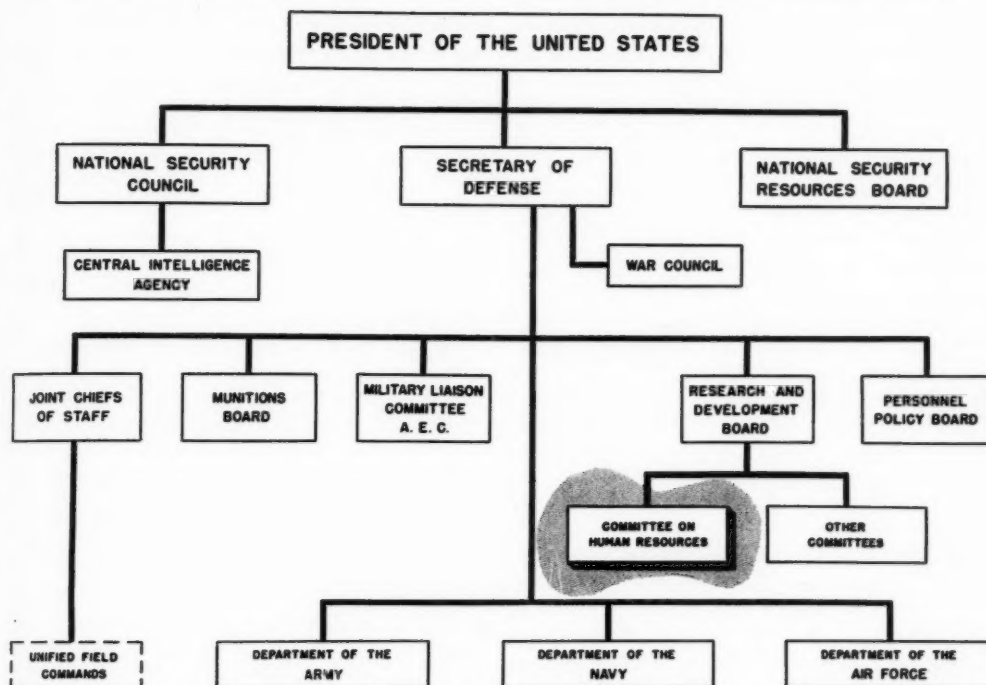


FIGURE 1—Organization Chart for the National Military Establishment

search programs for the development of the psychological and social sciences.

THE ORGANIZATION OF AGENCIES FOR NATIONAL SECURITY

The National Security Act of 1947—sometimes called the “unification act”—created a Secretary of Defense charged with overall executive responsibility for the entire National Military Establishment, an independent Air Force, and an imposing hierarchical system of planning and coordinating agencies. The general structural interrelationships among these

PRESIDENTIAL ADVISORY BOARDS

Two of the agencies shown in Fig. 1 lie outside the National Military Establishment and report directly to the President: the National Security Resources Board and the National Security Council. Although not at present actively concerned with psychological and social research, nevertheless both may eventually exert great influence upon investigation in certain fields.

The National Security Resources Board (NSRB). Headed by a civilian chairman who is appointed by

the President, NSRB is concerned mainly with the coordination of plans for mobilization—military, industrial, and civilian. Other members of the Board are the "heads or representatives of the various executive departments and independent agencies as may from time to time be designated by the President." Since the NSRB must advise the President concerning "the maximum utilization of the nation's manpower in the event of war," its requirements for knowledge concerning the psychological, sociological, and economic characteristics of the entire population are obviously extensive. To date, NSRB has concentrated mainly upon industrial problems, although considerable interest in the supply of scientific and technical personnel has been shown by certain of its staff members.

The National Security Council (NSC). This is entirely an "ex officio" agency over which the President or a designated substitute presides. The secretaries of State, Defense, Army, Navy, Air and the Chairman of NSRB are statutory members of the Council, and the President may from time to time designate as additional members the Chairman of the Munitions Board, the Chairman of the Research and Development Board, and other Cabinet members. Whereas NSRB is concerned with domestic relations and resources, the general function of NSC is to assess the objectives, commitments, and risks of the United States in its foreign relations. In this connection the Central Intelligence Agency was established for the general purpose of correlating intelligence, and advising NSC "concerning such intelligence activities of the Government departments and agencies as relate to the national security."

The field of "intelligence", in its broader aspects, promises to become a fruitful area for psychological and social research. In spite of the "cloak-and-dagger" connotations of the term, there are signs among several of the agencies represented in NSC that the necessity for systematic research upon the collection and assessment of information about foreign peoples and their governments is beginning to be appreciated. Partly due to lack of funds, there is little current research, although within the military departments important programs have been formulated.

THE NATIONAL MILITARY ESTABLISHMENT

The agencies under the Secretary of Defense include several advisory boards and the three military departments (Army, Navy and Air Force). The

former are concerned primarily with overall coordination and planning, the latter with their respective "operational" missions.

Of the staff agencies, the Munitions Board, the Personnel Policy Board, and the Research and Development Board are all concerned with psychological and social problems of great importance. The general functions of these agencies will be outlined briefly.

The Munitions Board. The military aspects of industrial production and procurement constitute the primary field of this Board. In addition, it is responsible for the coordination of the military manpower policies and requirements of the three departments. Collaboration between the Research and Development Board's Committee on Human Resources and the Munitions Board's Committee on Manpower Requirements has resulted in plans for research directed toward establishing manpower estimates on a more comparable and scientific basis.

*The Research and Development Board.*³ Under the provisions of the National Security Act this agency is directed, principally,

- (1) to prepare a complete and integrated program of research and development for military purposes;
- (2) to advise with regard to trends in scientific research relating to national security and the measures necessary to assure continued and increasing progress;
- (3) to recommend measures of coordination of research and development among the military departments, and allocation among them of responsibilities for specific programs of joint interest.

RDB is in certain respects the successor to the wartime Office of Scientific Research and Development, and, like OSRD, its first chairman was Vannevar Bush. RDB is, however, strictly a "staff" agency; it does not have funds for research contracts, as OSRD had, nor does it have direct supervision over research projects. Its membership consists of a civilian chairman⁴ and two members each from the Army, the Navy, and the Air Force.

RDB performs its functions of review, evaluation, and planning mainly through committees established in selected fields of science and engineering. Each

³ This board was preceded by the Joint Research and Development Board which was established by agreement between Secretary of War Patterson and Secretary of the Navy Forrestal in 1946. The National Security Act of 1947 gave the Board statutory status and a revised name.

⁴ Karl T. Compton recently succeeded Vannevar Bush as chairman of the Research and Development Board.

committee has a civilian chairman and several other civilian members, as well as an equal number of representatives (usually two) from each of the three departments. In addition, the committees have associate members from interested agencies within the National Military Establishment and from other government agencies, as well as special civilian consultants. The description in a subsequent section of the structure and functions of the Committee on Human Resources will illustrate the organization and operation of these committees.

The Personnel Policy Board. The task of this agency is the coordination and improvement of personnel administration throughout the National Military Establishment, including "development for the NME as a whole of sound, progressive and, where desirable, uniform policies and programs for civilian employees and for military personnel." Besides its civilian chairman,⁵ the Board consists of representatives of the three military departments.

The Military Departments. The principal agencies in the National Military Establishment are, of course, the Departments of the Army, the Navy, and the Air Force. The Secretary's staff agencies can perform valuable functions of coordination but the three departments actually expend virtually all of the approximately fifteen billion dollars in the national defense budget. Of this amount, incidentally, some two-thirds is spent on manpower costs, one-third on materiel. The magnitude of the former figure emphasizes the need for effective procedures in the utilization of personnel. And some indication of the comparative neglect of the scientific study of human resources is found in the contrast between the amount spent for non-materiel research with that spent for research on materiel. The total research and development budget runs to approximately half a billion dollars and it is estimated that less than four per cent of it is spent on "non-materiel research" (including medical and "quartermaster" as well as psychological and social studies). At present, about one and one-half per cent goes to research and development in the psychological and social sciences.

But the three military departments—supported by the Research and Development Board—are beginning to give systematic attention and increased support to "non-materiel research," in terms both of organizational recognition and of financial support.

⁵ Thomas R. Reid, vice-president in charge of human relations of McCormick and Co., Baltimore, is serving as chairman of this board during its organizational period.

This general trend will now be examined in detail. A description of the work of the Committee on Human Resources will serve as a preface to the discussion of the "non-materiel" research activities of the Army, the Navy, and the Air Force.

THE RDB COMMITTEE ON HUMAN RESOURCES

Established less than two years ago, the general objective of the Committee is to implement the directive of the Research and Development Board in the field of "human resources." Freely translated, this means that the Committee reviews and evaluates all research and development in psychology and the social sciences conducted by the Army, the Navy, and the Air Force. Furthermore, the Committee is directed to "prepare not less frequently than once a year an integrated plan of research and development for military purposes in the field of human resources," and to "allocate and when desirable reallocate responsibility among the military departments for research and development programs in human resources." Although the Committee has some direct jurisdiction over these matters, on all major issues it recommends action to the Research and Development Board. The latter has a wider range of authority to act directly, especially where unnecessary duplication of effort is involved. But in the event of disagreement, and on other important issues, the Board recommends action to the Secretary of Defense.

Membership. The essential characteristic of RDB and its Committees is the fact that the membership in all cases includes both civilian and military components. Furthermore, as noted above, a civilian scientist serves as chairman of each committee. Donald G. Marquis, University of Michigan, is chairman of the Committee on Human Resources, and there are three other civilian members: William C. Menninger, The Menninger Foundation; Carroll L. Shurtle, Ohio State University; and Samuel A. Stouffer, Harvard University. Civilian deputy members include Henry Brosin, University of Chicago; Walter S. Hunter, Brown University; and Frederick F. Stephan, Princeton University. There are two members each from the Army, the Navy, and the Air Force, representing agencies interested in research and development in human resources. The Committee meets in Washington approximately at bi-monthly intervals to consider an agenda prepared by its full-time staff. The latter

serves also as an informal advisory body to the Executive Secretary of the Research and Development Board. The professional members of the staff are: Raymond V. Bowers, executive director; Dwight W. Chapman, deputy executive director; and Henry S. Odber, panel director. There are three military secretaries, one from each department: Lt. Col. J. S. Moncrief, Jr. (Army), Lt. Cdr. D. J. Carrison (Navy), and Maj. H. E. Abbott, Jr. (Air Force).⁶

The Field of Human Resources. The Committee's directive defines four principal areas of research and development, each of which has been subsequently sub-divided into "technical fields." This analysis of problems is regarded as a comprehensive outline of the scope of investigation in the psychological and social sciences required for the effective operation of the NME, and hence for adequate national security. The following are the four areas and their technical fields:

1. *Psychophysiology*
 - a. Sensory Discrimination and Perception
 - b. Motor Skills and Proficiency
 - c. Human Engineering
 - d. Psychophysiology of General Organic and Special Environmental Conditions.
2. *Personnel and Training*
 - a. Basic Psychological Traits
 - b. Assessment of Characteristics of Individuals with Respect to their Potential Utilization
 - c. Job Analysis
 - d. Development of Criteria of Performance
 - e. Training and Education
 - f. Personal Adjustment and Rehabilitation
 - g. Work Simplification and Modification of Working Conditions
 - h. Study of Administrative Procedures in Personnel and Training
 - i. Research-supporting Functions and Facilities
3. *Manpower*
 - a. Manpower Requirements
 - b. Manpower Resources
 - c. Foreign Population and Manpower Intelligence
 - d. Scientific and Specialized Personnel
 - e. Manpower Mobilization Methods

⁶ Full roster of the Committee's civilian consultants was published in the *American Psychologist* in December, 1948, 3, p. 559. Included were members of the Committee, the panels, and the subpanels, as well as special consultants.

4. *Human Relations and Morale*

- a. Military Management
- b. Civil Defense
- c. Military Government
- d. Strategic Planning and Intelligence
- e. Psychological Warfare
- f. Utilization of Non-materiel Research

The Panels of the Committee. Corresponding to the four general areas, the Committee has established four panels: Panel on Human Engineering and Psychophysiology (Lyle H. Lanier, chairman), Panel on Personnel and Training (Robert L. Thorndike, chairman), Panel on Manpower (Philip Hauser, chairman), Panel on Human Relations and Morale (Charles Dollard, chairman). These panels also are composed of civilian and military members. Since the panels are the technical "working groups" of the Committee, their departmental representatives usually are scientists or technical specialists from appropriate agencies.

For purposes of detailed consideration of the research in special technical fields, the panels have established a variety of sub-panels and committees. These groups evaluate specific types of programs and projects in the three departments and prepare technical reports for presentation to the panel. Membership on the sub-panels is entirely professional in nature, consisting mainly of civilians.

The work of the panels is based upon materials collected by the RDB and committee secretariats, and upon reports presented to the panels by representatives of research agencies in the Army, Navy, and Air Force. Both fiscal and technical data are provided, together with outlines of long-range plans and special needs. These panel meetings thus constitute an automatic medium of "coordination" among technical agencies in the three departments. And the reports of the panels to the Committee review and evaluate current research and integrated plans for future programs.

General Achievements. Because the minutes, reports and studies of RDB agencies are mostly classified, it is impossible to review the substance of the Committee's work during the past eighteen months. And without reference to such material it is difficult to present a concrete picture of what the Committee's achievements have been. It should be stated, furthermore, that the writer's connection with the Committee obviously does not qualify him as an unbiased critic of its activities. In recording below some of the positive contributions of the Com-

mittee on Human Resources, it should be noted that a few psychologists in military agencies have occasionally expressed skepticism about the Committee and about the effectiveness of RDB in general. It is always difficult, of course, to adduce definitive evidence bearing upon such an issue. There is little doubt that RDB and its Committees have not yet exercised the influence over research and development in the three departments apparently contemplated in the National Security Act of 1947. In part, this is an inevitable consequence of the magnitude of the task of organizing the necessary machinery and of learning how to use it. Equally important is the fact, noted in Mr. Forrestal's first general report as Secretary of Defense at the end of 1948, that the act did not give to the Secretary unequivocal authority over the affairs of the three departments.

In spite of these difficulties, the Committee on Human Resources can lay reasonable claim to the following important achievements:

1. The Committee has presented to the Research and Development Board, and to the three military departments, a documented analysis of the nature and scope of research in human resources in the NME; has pointed out deficiencies of programs, facilities, and personnel; and has recommended a plan for the future.

2. The Committee recommended to RDB that the three departments increase sharply their support of research in human resources and that special attention be given to problems in the area of "human relations and morale." The specific effects of these recommendations cannot be determined until final budget allocations for fiscal year 1950 are made. But the Board received the Committee's recommendations favorably and transmitted them to the three departments.

3. In addition to its formal relations with military research agencies, the Committee and its secretariat have operated in a variety of informal ways to serve these agencies and often to influence their policies. Through definitions of technical fields, panel discussions and reports, and informal conferences, the conceptions and objectives of the Committee have been widely disseminated throughout the NME. The radical reorganization of psychological research agencies in the Air Force, to be described later, is a striking reflection of this type of influence.

4. Similarly, the Committee has established relationships with agencies in other government depart-

ments interested in psychological and social research. By interchange of ideas with such groups, the Committee's central mission of planning research on a broad inter-disciplinary basis has been effectively advanced.

5. The important methodological aspect of the Committee's work lies in the process of research planning itself. In many respects, the pattern of systematic, cooperative planning is a new technique in scientific inquiry, and the Committee's efforts should make valuable contributions to its development. As Marquis (3) noted, this type of policy planning is growing in importance as governmental agencies assume an increasingly large share of the support of scientific research.

DEPARTMENT OF THE ARMY

The Army's pattern for research and development in "human resources" is shown in Figure 2. It is an almost completely decentralized arrangement in which research on somewhat different types of psychological and social problems is conducted mainly by five agencies: the Adjutant General's Office, the Surgeon General's Office, the Troop Information and Education Division, the Office of the Quartermaster General and the Operations Research Office, an agency established by civilian contract with the Research and Development Group, Logistics Division. Other agencies of the Department of the Army concerned with psychological research are shown in Table 1.

While in the past these research efforts have been largely uncoordinated, there is now provision for coordination through the Director of Logistics, as Fig. 2 states. Moreover, supervisory control of the technical services has recently been transferred to this Division, which will certainly increase both the responsibility and the authority of the Research and Development Group.

In reviewing the research and development conducted under the five major Army agencies it will be impossible to do more than describe the general nature and scope of the work of the principal units. No systematic evaluation will be made of the substantive accomplishments of their programs.

ADJUTANT GENERAL'S OFFICE⁷

The Personnel Research and Procedures Branch, AGO, is by far the largest agency in the NME de-

⁷ Unless otherwise given the address of the research agencies discussed here is Washington 25, D. C. Table 1 below

voted to research and development in "human resources." Of its three sections shown in Fig. 2, the Manpower Analysis Section and the Personnel Research Section are the research and development agencies. The Personnel Procedures Section is mainly a "service" agency for the other two.

Personnel Research Section, AGO. This section is responsible for research and development on:

1. Identification, definition, and assessment of individual psychological characteristics for pur-

Because of the pressure of immediate operational requirements, much of the Section's work has been applied rather than basic research. Instead of basic research upon psychological differences among individuals and other problems related to the effective utilization of personnel, it has been necessary to concentrate upon specific procedures and instruments. During the past year, however, two important changes in policy have occurred which promise to correct this imbalance. The Director of Personnel

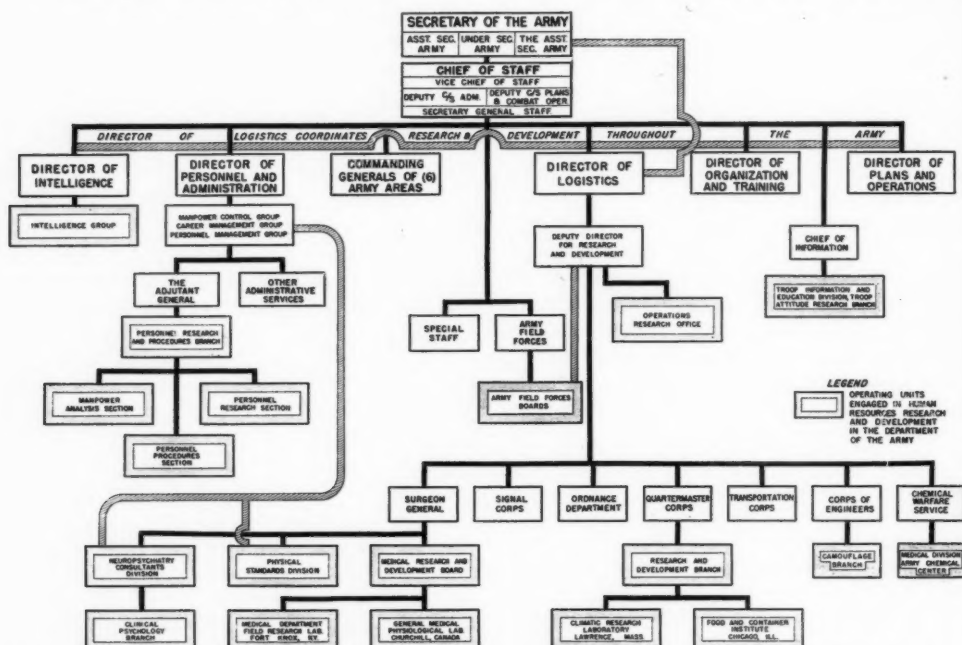


FIGURE 2—Organization Chart Showing Agencies in the Department of the Army Concerned with Psychological and Social Research.

poses of selection, classification, training, and effective utilization of personnel.

2. Administrative procedures and personnel management principles and practices concerning effective personnel administration and training.
3. Development and evaluation of criteria of performance.

Stress is laid upon the development, refinement, and evaluation of objective psychometric instruments and procedures.

shows the proper official addresses for many of the agencies. By reference to the organization charts, it will usually be possible to determine a similar form for units not listed in Table 1. Note that *Zone 25* means "Federal Government," rather than a location, in Washington, D. C.

and Administration has issued a policy memorandum to the effect that at least 25 per cent of the resources of the Section can be devoted to fundamental research in the general field of personnel psychology. The inclusion of funds for research contracts with civilian institutions is another step which should establish a better balance between basic and applied research in the Section's program.

Donald E. Baier is chief of the Personnel Research Section and his staff includes approximately 22 psychologists of grade P-5 or higher. The total number of civilians employed is approximately 115.

Manpower Analysis Section, AGO. The primary function of this unit is occupational analysis and classification. During the past two and one-half

years the Department of the Army has been engaged in an intensive program of revising its job structure, partly in implementation of its "career guidance program." The Manpower Analysis Section has had the major responsibility for analyzing the several hundred Army jobs and for organizing them into some fifty career fields. As with the Personnel Research Section, the pressure for immediate results has delayed the research which alone can validate job specifications and career fields. It should be added that both agencies are keenly aware of these research needs.

SURGEON GENERAL'S OFFICE

In 1945 the Office of the Chief Clinical Psychologist was transferred from AGO to SGO, where the Clinical Psychology Branch was established under the Neuropsychiatry Consultants Division. The branch is headed by Lt. Col. Charles S. Gersoni. With demobilization, virtually all of the Army clinical psychologists returned to civilian life, and the lack of professional personnel has greatly handicapped the development of an adequate research program in clinical psychology.

So far as current research activities go, the Surgeon General's Office has little in the way of an organized psychological program in any of the other fields of psychology under its cognizance. But the agency does have provision in its current budget for the establishment of a psychological facility in the Medical Department Field Research Laboratory at Ft. Knox. A P-8 position has been allocated for the technical director, with an appropriate complement of supporting professional staff. This laboratory will conduct research in the general fields of psychophysiology and human engineering (human factors in the design and operation of equipment).

TROOP INFORMATION AND EDUCATION DIVISION

This Division's Attitude Research Branch conducts surveys upon a variety of issues affecting the morale of enlisted men and officers. The major purpose is to provide information for use in the formulation of personnel policies and in their execution. Thus, most of the work is "developmental" in nature. The chief of the Branch is Lt. Col. Paul Guernsey, whose staff includes approximately 25 civilians and three military aides.

The Attitude Research Branch and the entire T I & E program is operated jointly for the benefit of the Army and the Air Force. Effective May 1, 1949,

an order of Mr. Forrestal has transferred this agency to the Office of the Secretary of Defense, where it will become the Armed Forces Information and Education Division, under the direction of the Personnel Policy Board.

This Division's wartime research will soon be reported in four volumes sponsored by the Social Science Research Council. This is a reminder of the considerably greater support given this type of research during the war. However, there is some hope that work in this field will be expanded in the near future.

OFFICE OF THE QUARTERMASTER GENERAL

The Quartermaster's two research laboratories, indicated in Figure 2, both conduct research upon psychological problems. But except for civilian contracts, no psychologists are engaged in the work (a position is available at C. S. grade P-6 or P-7). There has been a substantial program in the field of food preferences and ration acceptability, involving both psychological and sociological elements. Because of budget cuts, the program has been considerably reduced during the present fiscal year. Unless increased support is provided it probably cannot be restored to its former levels. The work is under the direction of W. F. Dove of the QM Food and Container Institute at Chicago, Illinois.

Although theoretically there are numerous psychological problems involved in the program of the Climatic Research Laboratory at Lawrence, Massachusetts, actually there is little or no psychological research in progress. The active projects are either physiological, chemical, or physical in nature.

It is of interest to note that the Quartermaster Corps conducts research in its assigned fields for all three services. Neither the Navy nor the Air Force maintains such a technical agency.

OPERATIONS RESEARCH OFFICE

This organization is represented in Figure 2 as a special agency of the Research and Development Group, Logistics Division. Actually, the Operations Research Office is operated by the Johns Hopkins University under contract with the Research and Development Group. Like the Rand Corporation, the program will thus be under non-military management, including any sub-contracting which might be necessary.

The Office (originally called the General Research Office), was conceived as an agency which would sponsor an "Army-wide general research program"

OFFICE OF NAVAL RESEARCH

In 1946, Mr. Forrestal, then Secretary of the Navy, announced that a substantial measure of military support of basic research in civilian institutions was required in the interest of national security. Accordingly, the Office of Naval Research was established to provide such support through contracts with universities and other private research agencies. Three main divisions of ONR were organized: Medical Sciences (including psychology), Physical Sciences, and Naval Sciences. Later the Naval Research Laboratory and Special Devices Center were transferred to ONR, and the Scientific Personnel Division was established to conduct studies related to the supply of scientists for Navy research programs. Figure 3 shows only the units of ONR which conduct research in human resources.

Psychology Branch, Medical Sciences Division. The projects supported by this branch fall into three groups: (1) selection, classification, and training; (2) abnormal behavior; (3) human relations. During the past two years several hundred thousand dollars have been allocated to universities and other research agencies for studies in these fields. About two-thirds of the Branch's budget has gone to projects in human relations, with some 18 per cent to personnel psychology and 15 per cent to abnormal behavior.

The human relations program of ONR is at present the only concerted effort within the NME in this field. These studies include problems in leadership, group productivity, communication, social organization, and cultural differences. They are carried out at several important university centers which are able through the funds provided to train seriously needed research personnel. The Navy officers who have supported the program in ONR, and especially Capt. C. W. Shilling, Director of the Medical Sciences Division, deserve high commendation for their far-sighted and effective encouragement of research in human relations.

The psychologist immediately in charge of this pioneering program is John W. Macmillan, head of the Psychology Section, ONR. In planning its general substance and in judging the merits of individual research proposals, he has been assisted by a Human Relations Advisory Panel whose present chairman is E. Lowell Kelly. Other members of the Panel include specialists in anthropology, sociology, political science, business administration, psychiatry, and

statistics, as well as psychology. The future of the program depends largely upon budget decisions for fiscal year 1950 and thereafter. Funds are at present inadequate to permit expansion.

In selecting projects in the other two areas, Macmillan has the guidance of the Intra-Navy Personnel Research Committee. Members of this committee include representatives of all agencies in the Navy concerned with the selection, training and management of personnel.

Psychophysiology Branch, Medical Sciences Division. Sensory discrimination is the primary interest of this branch of ONR. Most of the projects lie in the fields of vision and audition, with almost an equal division between the two sensory areas. The remainder of the program, constituting about 14 per cent of the total, includes projects on other senses and on intersensory relations. It is smaller in budgetary magnitude than that of the Psychology Branch, but even so, its expenditures over the past two years have been considerable. Most of the important laboratories in sensory psychophysiology in the country are receiving financial aid from this branch, a fact which can be verified by reading the acknowledgments printed with published articles.

The head of the Psychophysiology Branch is Henry A. Imus, and the chairman of his Naval Research Advisory Panel for Psychophysiology is H. K. Hartline. This panel investigates the merits of all research proposals submitted to the Branch and makes recommendations concerning their acceptance. In addition to psychology, other fields represented in the Panel's membership include physiology, medicine, and physics.

In conformity to the original purposes of ONR, research proposals in the basic scientific divisions are judged primarily on the basis of their scientific merit and promise, not in terms of naval utility. And the investigator is left free to carry out his research as his scientific judgment dictates, as well as to publish his results without any "clearance" by Navy officials.

Psychology Section (Radio III), Naval Research Laboratory. Under the direction of Franklin V. Taylor, this facility is one of the four laboratories in experimental psychology maintained by the Navy. Its program includes two distinct components: (1) basic research in motor psychology, (2) application of psychological principles to the design of fire control and missile control systems. The effort of the unit is divided about equally between the two types of functions. The allocation of 50 per cent of the labora-

tory's time to fundamental research has made possible pioneering work on the mechanism controlling corrective tracking (pursuit) movement. Supplied with good equipment and invigorated by new theoretical conceptions, these investigators are important contributors to a renaissance in motor psychology. Together with members and contractors of the Psychology Branch of the Aero Medical Laboratory, the NRL psychologists are exploring the possibilities of using the electronic "servo" system as a conceptual model for representing the factors controlling motor behavior.

The Psychology Section (Radio III) at NRL is the only psychological agency in the NME working on problems in fire control. Although its basic research on pursuit motion has no immediate utility, the remainder of the laboratory's work is strictly practical in nature. It consists primarily in consultation work with engineers who are designing the controls and consoles of various fire control systems.

Human Engineering Division, Special Devices Center (Port Washington, L. I., N. Y.). Next to the Personnel Research Section of AGO, this agency has the biggest budget for psychological research in the NME. Virtually all of it is done by civilian institutions under contracts. A relatively small technical and clerical staff is maintained at Special Devices Center, for administrative purposes and for coordination with the engineering divisions. When the Human Engineering unit was recently expanded into a full-fledged division, four separate sections were formed, each with a distinctive set of research projects. The Design and Evaluation Section sponsors research on synthetic training devices and related problems. The study of "mass education" devices and techniques is a major responsibility of the Education and Learning Section, which also supports studies of educational curricula in Navy schools. The Research Section has charge of certain basic research projects, with emphasis upon motor skills. A few quite substantial programs are conducted by the Systems Studies Section. Focussed upon such problems as communication systems in ships, submarines, and airplanes, these studies range all the way from consultation on the arrangement of systems to basic research on the human functions involved at key points in the man-machine circuits.

Harold A. Voss is acting head of the Human Engineering Division, SDC, having succeeded Leonard C. Mead when the latter returned to Tufts College in September, 1948.

Scientific Personnel Division, ONR. Although primarily a "service" division of the ONR, this agency has sponsored certain projects which are of general interest to scientists in many fields. Perhaps the principal one is the roster of scientists being compiled by the National Research Council in cooperation with *American Men of Science*. Initiated by this division, the roster of key scientists has become a joint project of all three military departments. A. H. Hausrath is director of the division.

BUREAU OF MEDICINE AND SURGERY

During the recent war more than 200 psychologists were commissioned under the Bureau of Medicine and Surgery, about half of them in the Aviation Psychology Section headed by the late John G. Jenkins. Like most of the other military research agencies, this Bureau has suffered a very serious depletion of psychological personnel, greater perhaps than any other major agency except the Air Surgeon's Aviation Psychology Program. The organization remains, as Figure 3 shows, but psychological activity is on a greatly reduced scale. Nevertheless, the Research Division has two active laboratories in experimental psychology and there is probably far more opportunity for research than most men saw during the war.

Aviation Psychology Section, Aviation Medicine Division. The director of the Section is Lt. Harry J. Older and he has two other psychologists on his staff. Of necessity, therefore, the greater part of the work of the agency must be done either on contract or through collaboration with other units which can supply research and supporting personnel. The major research effort of this Section is a joint testing project in which the Air Force's Department of Psychology in the School of Aviation Medicine, the Navy's School of Aviation Medicine, and the Naval Air Training Command are collaborating. Using a great variety of tests on a large sample of trainees, this study is designed to isolate psychological variables which can be used to increase the efficiency of selection and training of pilots.

Within the Section the principal program is a methodological study of the derivation of questionnaire items useful in the measurement of personality variables. In addition, two test development projects are in progress under contracts with universities.

Psychology and Statistics Facility, Naval Medical Research Institute (Bethesda, Md.). The research

program of this laboratory lies in the general field of "psychophysiology," and at present emphasizes three main types of problems: (1) factors influencing sleep, including neural basis; (2) physiological factors in learning; (3) a study of "randomness" in responses to stimuli in the range of uncertainty. In addition to the research program, the facility provides statistical services to other departments of the Institute. Its studies of sleep-wakefulness cycles promise to yield information useful to the Navy in the planning of watch schedules. J. P. Flynn is the head of this facility.

Medical Research Laboratory (U. S. Submarine Base, New London, Conn.). The primary purpose of this laboratory is to improve the efficiency and effectiveness of the submarine force, both through research and through application of results to problems of selection and training. Most of the psychological work is in vision, hearing and personnel selection. The visual work is sub-divided into three areas: (1) general vision, under Forrest L. Dimmick (scotopic and mesopic vision mainly); (2) color vision, under Lt. Comdr. Dean Farnsworth (color blindness, signals and instrument display, illumination and color conditioning); (3) visual screening, under Lt. Comdr. Ellsworth Cook, Jr. The sound facility is headed by J. Donald Harris and its studies include psychophysics of tonal dimensions, the relation of hearing to speech reception, and selection aspects of sonar training.

BUREAU OF PERSONNEL

This Bureau's Research Activity is largely concerned with occupational analysis, personnel selection and classification, and evaluation of the effectiveness of training. The three divisions of the unit shown in Figure 3 correspond to these three classes of problems.

Billet and Qualifications Research Division. Occupational analysis is the primary function of this unit. Like its opposite number in the Army, it develops job descriptions and specifications, and establishes the rationale for the Navy's complex occupational structure. A problem of joint concern to the occupational analysis agencies of all three services is the correspondence between jobs among the three departments, and the relationship of military occupations to civilian jobs. Encouraged by the Munition Board, all three services are attempting to develop conversion tables to facilitate such compari-

sons, and hence to improve the estimates of their manpower requirements.

Classification and Field Research Division. Test development and validation are the primary activities of this agency, which is now headed by E. G. Brundage. Its general mission is to devise procedures for the selection and classification of enlisted and officer personnel throughout the Navy. With a staff less than one-tenth the size of the Army's Personnel Research Section (AGO), this Division has great difficulty keeping pace with day-to-day "operational" demands. Fundamental research, or even satisfactory applied research, is necessarily difficult under such circumstances. The Navy needs to provide greatly increased support for its personnel research agencies, since its personnel problems are probably more varied than those of either of the other two services.

Training Research Division. The mission of this agency is defined as follows: "To conduct research on the problems relating to the training of naval personnel ashore and afloat and to construct suitable instruments for measuring the effectiveness of training." Much of the time of this division goes to the construction of achievement examinations, and there is little opportunity for research. E. D. Carstater directs this agency's program.

Training research is largely neglected not only by the Navy but by the other two departments as well. The very difficult problem of evaluating performance beyond the classroom and of developing effective predictors of it is one which the military departments are well suited to investigate and which they must eventually meet head-on if they are to use their personnel with maximal effectiveness.

It should be recalled that many of the ONR projects are related to the personnel problems of these three divisions, and this basic research in civilian institutions compensates to some extent for the lack of in-service research.

OTHER BUREAUS

Several agencies are grouped under "Other Bureaus" in Figure 3. The Marine Corps, for example, has its own Classification Division which is engaged largely in the development and use of selection tests. And at the Naval Air Experimental Station in Philadelphia the Navy has an Aeronautical Medical Equipment Laboratory responsible for the study of human factors in the design of equipment. But this agency at present lacks a research staff in

this field and hence does little systematic work in "human engineering." The third agency, shown in the chart, Navy Electronics Laboratory, has an exceptionally promising psychological research facility whose program will be briefly described.

Navy Electronics Laboratory, Bureau of Ships (San Diego, Calif.). Although not yet an official division of the laboratory, the psychological unit under Arnold M. Small is conducting an extensive program of research on psychological problems associated with electronic equipment, and with the selection, training, and evaluation of operators. Studies of the operation of sonar equipment constitute the primary field of interest of the group of more than 23 civilians in the psychological unit. It is interesting to record that the evaluation of such important equipment is now turned over to psychologists. In support of these evaluation studies a wide range of experimental problems in hearing and communication is investigated in the laboratory. Although not yet officially approved, plans for the expansion of the psychological unit propose a research program ranging from psychophysics to human relations. Arrangements have been made with the University of California for accrediting courses and practicum work offered at the laboratory.

In concluding the review of Navy research, it should be mentioned that a central "Human Resources Office" has recently been established in the Office of the Chief of Naval Operations. This office will presumably coordinate developmental and operational research in the psychological and social sciences throughout the Navy. It should be especially effective in bridging the great gap between research and fruitful application of results.

DEPARTMENT OF THE AIR FORCE

During the past year the Air Force has radically reorganized its agencies concerned with research in "human resources." At the end of the last war a compromise arrangement was made whereby the Aviation Psychology Program remained under the general technical supervision of the Air Surgeon, but with primary control of the individual research units vested in the local commands. Meantime, all materiel research was coordinated under the Deputy Chief of Staff for Materiel, in the Directorate of Research and Development. The latter agency was assigned responsibility for the integration and defense of all budgets for research and development in the Army Air Forces. This arrangement was bound to be disadvantageous for psychological re-

search. Added to the depletion of professional staff due to demobilization, the divided organizational responsibility created a condition of growing dissatisfaction with the Aviation Psychology Program, especially on the part of the Air Training Command. At the same time, the separation of the Air Force from the Army increased greatly the load of research responsibilities, particularly in areas formerly under the cognizance of the Personnel Research and Procedures Branch (AGO.)

Out of the ferment generated by these and related conditions came the reorganization represented in Figure 4. It is not a fully integrated scheme, but the organizational structure represents a very substantial step towards the institutionalization of the human sciences on a basis of equality with the physical and engineering sciences. Inspection of Figure 4 shows agencies organized at two main levels: (1) staff agencies at Air Force Headquarters at Washington, and (2) "operating" research organizations in the major Air Force commands.

HEADQUARTERS ORGANIZATION

Human Resources Division, Directorate of Research and Development. This is the key agency in the Air Force's new program. Its branches correspond to the panels of the Committee on Human Resources, except that a Planning and Administration Branch has been added. The new Division will coordinate research and development in the psychological and social sciences throughout the Air Force. This function will be performed partly through the Human Resources Sub-Committee of the Air Force Technical Committee, which consists of representatives of collateral staff agencies concerned with these problems. The Human Resources Professional Advisory Committee, shown to the left of the Division in Figure 4, consists mainly of psychologists and social scientists.

In many respects the foregoing is the type of organization recommended in March, 1946 by a group of psychologists who met at Major General Le May's suggestion to discuss the future of psychology in the Army Air Forces. In at least one respect, the group's "level of aspiration" was exceeded: instead of a civilian psychologist of P-8 grade the new position as technical head of the division is listed as P-9.⁸ It is planned to have high level positions for the

⁸ The Civil Service grade P-9 has a salary range from \$12,000 to \$15,000; P-8 salaries at present are mostly \$10,300. Forty-five P-9 positions were authorized by Congress when the National Security Act was passed in 1947; 15 were allotted to each department.

heads of each of the five branches, although difficulties in securing qualified personnel may prevent such appointments immediately.

Psychological Branch, Office of the Air Surgeon. This office will continue to exercise technical supervision over the two psychological laboratories now located in medical research agencies: the Psychological Branch of the Aero Medical Laboratory (Wright-Patterson Air Force Base) and the Department of Psychology in the School of Aviation

contract with Douglas Aircraft Corporation, but for various reasons it was decided to separate the project from the aircraft company. So an independent non-profit research institution was organized for the purpose of conducting pioneering research in several fields of science and engineering. The Social Sciences Division is conducting a substantial program in several of the social sciences. Some of the work is done on sub-contract with universities.

Career Utilization and Classification Control Divi

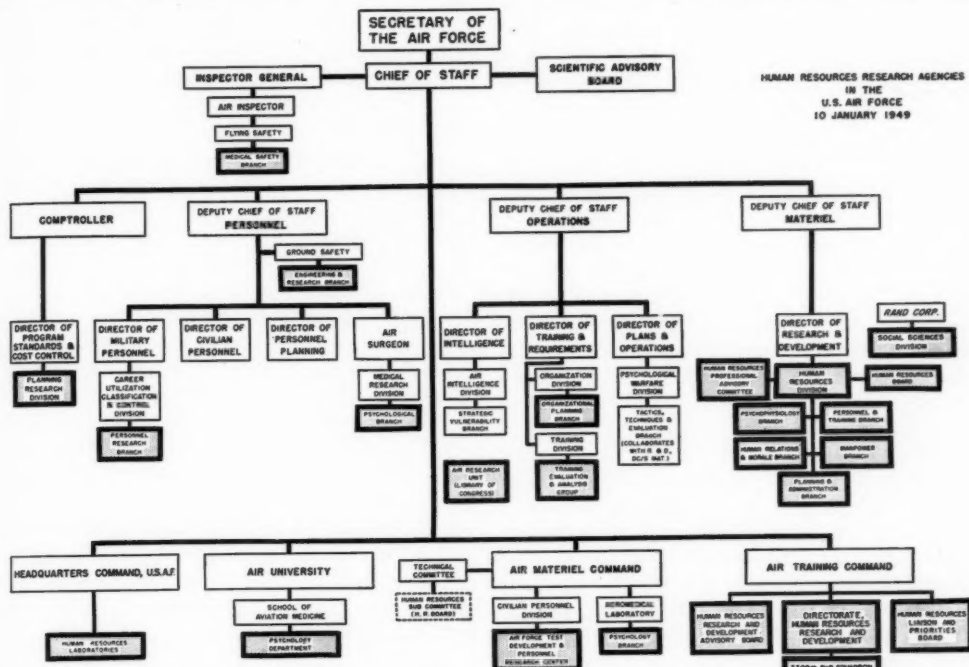


FIGURE 4—Organization Chart Showing Agencies in the Department of the Air Force Concerned with Psychological and Social Research.

Medicine (Randolph Air Force Base, Texas). The Air Surgeon will have a representative on the Human Resources Technical Sub-Committee and work done under his supervision will be coordinated with the remainder of psychological research in the Air Force. Discussions are in progress concerning the redefinition of the responsibilities of the Air Surgeon for psychological research, in the light of changes elsewhere in the Air Force.

Social Sciences Division, Rand Corporation (Santa Monica, California). This is an independent organization supported mainly by Air Force funds. Until last July, Project Rand was conducted under

contract with Douglas Aircraft Corporation, but for various reasons it was decided to separate the project from the aircraft company. So an independent non-profit research institution was organized for the purpose of conducting pioneering research in several fields of science and engineering. The Social Sciences Division is conducting a substantial program in several of the social sciences. Some of the work is done on sub-contract with universities.

Other Agencies. Several other staff agencies are shown in Figure 4, but for the most part they are not engaged in systematic research and development. To a limited extent the Air Research Unit of the Library of Congress carries out studies in fields of social science related to intelligence problems.

AIR MATERIEL COMMAND

Psychology Branch, Aero Medical Laboratory (Wright-Patterson Air Force Base, Dayton, Ohio). This branch is one of the major research agencies in the country in the field of engineering psychology (human engineering). A recent statement defines its aims as follows: "The purpose underlying the Air Force Engineering Psychology programs is to promote basic psychological research on human capabilities and limitations in using equipment, and to make this information available in usable form to staff officers who establish requirements for new equipment and to engineers who design the new equipment, in order that the final product can be operated effectively by human beings."

More specifically, the research of the laboratory includes studies which fall mainly into two major classes: (1) the display of visual information, and (2) perceptual and motor problems related to aircraft controls and systems. In connection with the latter class, the Psychology Branch is participating in the "servo analysis" of human behavior, with a view to developing techniques for the frequency analysis of human responses in continuous control systems and to developing mathematical systems for describing human control dynamics.

In addition to its research program, the Branch provides consultation services in engineering psychology to engineers engaged in the design and development of equipment. Related to this work is the preparation of a practical "engineers guide" to psychological principles on the design of equipment.

At present the staff of the Psychology Branch numbers 18, including 12 civilians. In addition, some 40 to 50 individuals in universities are working under contracts with the Branch. From its own investigations and from these contracts an important series of technical reports have been prepared on a wide range of problems in the field of human engineering. (Distribution of these reports is limited to Government agencies and to private research agencies which are developing equipment or conducting research of interest to the Government.)

AIR TRAINING COMMAND

The reorganization carried out in the summer of 1948 at Air Force Headquarters was stimulated by requests from the Air Training Command for an expansion of its program of research and development in "human resources." After the reorganiza-

tion at the general staff level had been completed, a new Air Force Letter (No. 80-4) assigned to the Air Training Command responsibility for research and development in the following major areas: (1) selection, classification, and manpower analysis; (2) training and education; (3) evaluation of individual and unit proficiency; (4) human relations and morale in training. A wide range of problems was defined under each of these major headings. In implementation of this directive, the Commanding General, Air Training Command, has established a unified research organization in "human resources" which is unique in the NME.

Three principal components are shown in Figure 4 for the Air Training Command's research and development agency: (1) the Directorate of Human Resources Research and Development, which will have charge of all research personnel in this field throughout the Air Training Command, and which at the same time will serve as a staff division at headquarters; (2) the Human Resources Research Advisory Board which is responsible directly to the Commanding General; (3) the Human Resources Research and Development Liaison and Priorities Board. The latter Board consists of representatives of collateral staff divisions at headquarters, in addition to representatives from each operating Division of the Command (there are three such Divisions: Indoctrination, Technical, and Flying).

The technical director of the division has the second P-9 rank to be allocated to a psychologist. The organization of the Directorate of Human Resources Research and Development is now in progress and tentative plans call for an operating branch in each of the divisions just listed. In addition, a central branch will be created to conduct research on "human relations and morale in training" throughout the Command.

3309th Research and Development Group (Lackland Air Force Base, Texas). This unit has just been reassigned to Headquarters, Air Training Command, but will continue to work at the same station (Lackland). The group has been active in the development of a variety of selection and classification tests at the Indoctrination Division. A particular task has been the development of an Airman Qualifying Examination and an Airman Classification Battery. Its activities are expected to continue on an expanded scale under the new arrangement.

Two other field research groups will be established

in the Technical Division and in the Flying Division, and there has been preliminary discussion of the establishment of a special experimental school which would serve as a laboratory for many types of research projects.

AIR UNIVERSITY

Department of Psychology, School of Aviation Medicine (Randolph Air Force Base, Texas). This is the only active research unit in the Air University, which is a separate Air Force command. So far no new regulations have been issued by Headquarters USAF to redefine the mission of the unit in the light of the organization of the new "human resources" agencies at Headquarters and in the Training Command. Its program has been concerned with selection and classification of air crew members, with emphasis upon psychomotor performance.

In addition to its research and development activities, the Department offers instruction in psychology to a variety of groups in the School, including trainees in a "career plan" for psychological assistants. It also will shortly open a psychological clinic, which will be the only one, so far as the writer knows, in the entire NME.

HEADQUARTERS COMMAND

Human Resources Research Laboratories. This agency was formerly the Aviation Psychology Branch of Headquarters, Strategic Air Command. The laboratory now has space at the Naval Research Laboratory, but is under the direction of the Headquarters Command (a group of Air Force installations in the Washington Area, not Headquarters USAF).

The program of the HRRL includes studies in the following three areas: (1) measurement of proficiency of critical operational personnel and the construction of "advanced" selection tests; (2) research on communications; (3) man and job analysis, with emphasis upon the quantitative analysis and description of operations. A first-class experimental laboratory is under construction and provision has been made for a substantial expansion of the staff.

INTERDEPARTMENTAL SUMMARY

This concludes the review of research and development in the military establishment. A brief recapitulation and commentary will serve as an

introduction to the final section which considers the general relationship of military research to civilian science.

General Institutional Status of Psychology and Allied Sciences. The record clearly shows that considerable progress has been made towards clear-cut institutional recognition of these fields. The road has not been easy and much remains to be done. (The physical and the medical sciences did not achieve their special technical services or bureaus overnight.) One tends now to find scattered individuals and laboratories located predominantly in medical agencies, less frequently in personnel agencies, occasionally in engineering research groups or in special offices. But the new Air Force organizations for research in "human resources," and the efforts of the Research and Development Board's Committee will unquestionably accelerate the trend towards professional independence and unification of "non-materiel" research activities. One of the most important achievements of the postwar period has been the introduction of psychologists at staff level, with responsibility for planning psychological research and with the opportunity to interpret the implications of such research for effective military operations.

Programs. Marked differences are found among the three departments both in level of effort and in pattern of research interests. The Army's most substantial research program is that of the Personnel Research and Procedures Branch, AGO. There are plans and even increased appropriations for work in "human engineering," and in certain aspects of social psychology and "operational evaluation," but these programs are as yet undeveloped. A very substantial part of the Navy's budget for research in "human resources" is used for ONR contracts with civilian institutions. The in-service facilities are mainly in psychophysiology and human engineering, and its four laboratories in experimental psychology are important research centers (see pp. 137-8). Personnel research and in-service studies of other psychological and social problems are poorly supported. The Air Force at present has a small program and large plans. There are three experimental laboratories, one of them being probably the most productive unit in the NME in terms of research output (Psychology Branch, Aero Medical Laboratory). The new organizational structure is very promising and adequate budgets seem in prospect to imple-

ment the somewhat ambitious plans. The social science work at Rand Corporation complements ONR's basic research contracts.

Personnel. The outcome of plans for expansion naturally depends largely on the availability of key research personnel. At present the entire National Military Establishment has about 75 psychologists of grade P-5 or higher. Considerably more will be needed if present plans are to be implemented. This is a problem which deserves careful, formal consideration by the military departments and by the American Psychological Association. There are a variety of methods whereby the supply of personnel for military research might be increased: (1) improvement in the professional status of scientists in the military departments; (2) systematic cultivation of internships and other devices whereby junior professional personnel might combine educational and research experience; (3) part-time work by mature scientists, for example, during the summer vacations; (4) leaves-of-absence for civilian scientists who might work on special assignments; (5) training fellowships and assistantships which would support graduate students in areas where undue shortages exist; (6) graduate training of selected officers in universities.

Contracts With Civilian Institutions. Approximately one-third of the funds available for psychological and social research in the NME goes for contracts with universities and other research agencies. For the general information of the interested individuals and institutions, a list of federal agencies conducting research through contracts with civilian agencies is presented in Table 1. The first column gives the name of the agency and the principal scientific director or consultant connected with the agency, the second gives the form of address to be used in correspondence, and the third states the research interests of the agency. It should be stressed that the listing of these agencies does not mean that funds are currently available for new contracts. And in some instances, the agencies listed have only indirect access to such funds.

No set procedures can be prescribed for the submission of research proposals. It is recommended that a preliminary inquiry first be addressed to the agency, which will supply information concerning the availability of funds and the procedure to be followed in submitting research proposals.

MILITARY RESEARCH AND CIVILIAN SCIENCE

These are the major facts about the psychological and social sciences in the National Military Establishment. There is a lot of "classified" information, but knowing it would add to the picture mainly in the dimension of planning. Marquis (3) has already reported that the present level of expenditure is likely to be doubled or trebled in the near future, with increased emphasis upon problems in human relations.

What does all this mean for psychologists and social scientists? Is there grave danger that fundamental research will be neglected in favor of applied research and development? Budgetary pressure upon institutions and upon individuals might conceivably result in an unwise distortion of the pattern of psychological science, through undue participation in military research. Further considerations involve the security "classification" of research, and the control exercised over scientific activity by non-scientific military administration.

These are grave issues in the philosophy of research and of its relations to society as a whole. The present writer has already suggested in the introduction to this paper that while these issues should properly be viewed with concern, they are not insuperable. Furthermore, there are opportunities as well as difficulties involved in the military support of research. A few of these are suggested here for the consideration of psychologists as a professional group:

1. At a very general level, there is the opportunity to learn how to cooperate with a public institution, to the mutual benefit of the agency and the professional group. The widespread practice of civilian consultation and advice is a salutary procedure in the planning of programs and policies. Such a reciprocal relation between the citizen scientist and the military institution would seem to be essential to a democratic society. Few scientists who criticize the military would wish to see the institution abolished. The alternative is effective cultivation of fruitful relationships.

2. With its very large numbers of men available and the variety of occupations, there are many kinds of research which could be carried out very effectively in a military institution. In the fields of human engineering and personnel psychology (in the broader sense), conditions can be made available

TABLE 1

Federal government agencies conducting psychological research through contracts with civilian institutions

AGENCY AND CHIEF PSYCHOLOGIST ¹	OFFICIAL ADDRESS	PROGRAM
ARMY		
Research and Development Group, Logistics Division T. G. Andrews	Deputy Director, Research and Development Group, Logistics Division Department of the Army Washington 25, D. C.	Psychophysiological problems of interest to the Army in the planning and development of strategy, tactics, logistics, weapons, and weapon systems
Office of the Adjutant General D. E. Baier	The Adjutant General Attention: AGPP-L Donald E. Baier Department of the Army Washington 25, D. C.	Aptitudes, abilities, skills, interests, and other traits in relation to military occupational and manpower needs
Office of the Surgeon General Lt. Col. C. S. Gersoni	Chief, Medical Research and Development Board Office of the Surgeon General Department of the Army Washington 25, D. C.	Psychophysiology, including sensory discrimination and perception, motor skills, human engineering; organic and environmental conditions, psychopathology, including prevention, diagnosis, and therapy
Office of the Quartermaster General (Vacancy)	Chief, Research and Development Branch Office of the Quartermaster General Department of the Army Washington 25, D. C.	Design and evaluation of consumer preference studies on acceptability of food, clothing, and other items; environmental protection
Office of the Chief of Ordnance	Chief, Ordnance Research and Development Division Office of the Chief of Ordnance Department of the Army Washington 25, D. C.	Research and development on optics and optical systems and equipment
Army Chemical Center	Chief, Medical Division Army Chemical Center Maryland	Psychological aspects of chemical and related forms of warfare
Camouflage Branch	Chief, Camouflage Branch Engineer Research and Development Laboratory Ft. Belvoir, Virginia	Perceptual problems of object recognition and identification and figure-ground relations in camouflage
NAVY ²		
Psychology Branch, ONR J. W. Macmillan	Office of Naval Research Attention: Code 445 Navy Department Washington 25, D. C.	Selection, classification, and training; abnormal behavior; human relations and social psychology
Psychophysiology Branch, ONR Henry Imus	Office of Naval Research Attention: Code 444 Navy Department Washington 25, D. C.	Vision, hearing, and other senses

TABLE 1—Continued

AGENCY AND CHIEF PSYCHOLOGIST ¹	OFFICIAL ADDRESS	PROGRAM
Scientific Personnel Division, ONR A. H. Hausrath	Office of Naval Research Attention: Director of Scientific Personnel Division Navy Department Washington 25, D. C.	Problems related to scientific and engineering personnel resources, education, inservice training, and management; studies of methods of research concerning scientific and specialized personnel
Special Devices Center, ONR H. A. Voss	Commanding Officer and Director Special Devices Center Sands Point Port Washington, L. I., N. Y.	Human factors in the design and evaluation of equipment; learning and training techniques; human engineering systems research
Bureau of Naval Personnel E. G. Brundage	Chief of Naval Personnel Attention: Personnel 152 Arlington Annex Navy Department Washington 25, D. C.	Personnel selection, training, and evaluation
Bureau of Medicine and Surgery	Chief of Bureau of Medicine and Surgery Attention: Director of Research Division Navy Department Washington 25, D. C.	Aviation personnel selection and classification; personality indices; psychophysiology; vision and hearing
AIR FORCES		
Directorate of Research and Development	Deputy Chief of Staff for Materiel Headquarters, USAF Attention: Directorate of Research and Development, Human Resources Washington 25, D. C.	General information; programs on tactical or strategic problems affecting the whole Air Force
Aero Medical Laboratory	Commanding General, Air Materiel Command Attention: MCREX-D Wright-Patterson Air Force Base Dayton, Ohio	Human engineering, engineering psychology, and psychophysiology
Air Training Command	Commanding General, Air Training Command Attention: Director of Research and Development Barksdale Air Force Base Shreveport, Louisiana	Personnel selection and classification, training and education, proficiency measurement, human relations and morale in training
School of Aviation Medicine	Commandant, School of Aviation Medicine Attention: Psychology Department Randolph Air Force Base Texas	Selection and classification of air crew members; psychophysiology; basic problems in medical psychology
Human Resources Laboratories	Commanding General, USAF Headquarters Command Attention: Human Resources Laboratories Bolling Air Force Base Washington 20, D. C.	Proficiency of operational personnel, operational training methods, man and job analysis, communications

TABLE 1—Concluded

AGENCY AND CHIEF PSYCHOLOGIST ¹	OFFICIAL ADDRESS	PROGRAM
UNITED STATES PUBLIC HEALTH SERVICE		
Public Health Service J. M. Bobbitt	Dr. David E. Price Division of Research Grants and Fellowships National Institute of Health Bethesda 14, Maryland	Studies in the field of mental health
VETERANS ADMINISTRATION		
Veterans Administration H. M. Hildreth	Assistant Medical Director for Research and Education Veterans Administration Washington 25, D. C.	Basic or applied research which will preferably have immediate value for the medical care of veteran patients

¹ The chief psychologists listed in the first column do not necessarily have control over funds which may be available for contract research.

² In the case of Navy bureaus it should be reiterated that such funds as they may have available for research contracts are normally released through the Office of Naval Research. The bureaus may initiate requests for research funds from an ONR agency.

for many kinds of studies which are difficult to carry out elsewhere. Systematic exploration of the general techniques of operational research ("action research") and evaluation is appropriate to these problems.

3. In most areas of psychology there are no adequate population standards for important psychological functions. Even our data on physical characteristics are woefully inadequate. Something in the nature of a "National Bureau of Psychological Standards" would contribute enormously to the precision of the rough estimates and extrapolations which psychologists must now make in almost any dimension of behavior. Partial support for such an enterprise might well be secured from the military departments, which need accurate information concerning the quality and the quantity of psychological resources in the population.

4. The field of human relations promises to become one of the most fruitful areas of future inquiry in the National Military Establishment. With its variety of social groups, and the "controlled" character of so many of their activities, the opportunities for fundamental social research are very great. And there are substantial indications that research in this field will receive increasing support

in future budgets of the military departments. If properly planned and executed, such studies should contribute greatly both to a theoretical understanding of human nature and to effective methods of conducting human relations.

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THE PLACE AND FUNCTIONS OF PSYCHOLOGY IN UNDERGRADUATE PROGRAMS¹

S. L. PRESSEY

Ohio State University

PSYCHOLOGISTS are now in demand as never before, with the emphasis on non-academic positions; university departments are pre-emptively busy with graduate programs, and problems of advanced training have the most earnest attention at professional gatherings. In such a situation, it is easy to overlook the fact that, in the long run, sound growth of our profession and our science has its roots in effective programs of undergraduate instruction. Moreover, the great majority of students in most undergraduate classes are *not* majors in psychology. Their purposes are broader than simply the study of the subject for itself. To the great irritation of some of our colleagues, some students expect our subject to be of help to them in their own problems of living. Many take courses in psychology as part of a broad program of general education, and it is hoped that the subject may be coordinated with and illuminative of issues in various other subjects. For other students, our subject is part of undergraduate professional training (as in teaching) on the assumption that it will be valuable as part of that training. It is not enough that our objective should be to teach psychology as we see it, without consideration of such wider purposes.

Certain recent trends in higher education are here congruent. Some college administrators take the point of view that colleges should not only teach subject matter but also aid students in their total development as human beings, and that, in certain courses at least, both subject matter and methods should take account of this last broad purpose. They also ask that at least a few courses in a few important subjects be, at least in part, expressly planned so that they have richly fruitful inter-relations. They even venture to question the jealously guarded right of each department to practically complete independence in planning every course—including independence of these last broad objectives—and may even set up new courses largely separate from established

departments, when these last prove not responsive to such needs.

The thesis of this brief paper is that, in the excitement of our present professional boom period, we are so neglecting these services psychology should render in undergraduate programs that we may soon find ourselves there relegated to a relatively subordinate role, to the decided handicap of our profession, and ultimately of our science—and this when we might have rendered these services better than the agencies taking them over.

THREE ALMOST-LOST MAJOR PROFESSIONAL OPPORTUNITIES

The first neglect is well evidenced by a study which should be familiar to all teachers of undergraduate courses in psychology—*Women after College: A Study of the Effectiveness of Their Education*.² Intensive continuing case studies were made of a group of college graduates. And certain devastating tables list first the courses these women took in college and then the major problems they reported in their pre-college, collegiate, and after-college lives. The problems—as of relations with parents, vocational choice, marriage, finding one's place in a new community, raising a family—were indeed common. And the courses in college—algebra, medieval history, rhetoric, geology—how lacking most of them were, of any help to these women in meeting these problems! The largest group of problems was found to be psychological. Yet the blunt statement is made (p. 260) that "psychology, which is supposed to be the science of human behavior, had little functional value for these women in their own personality development."

And as a result of a rather common feeling to this effect, there seems to be a growing tendency to introduce non-departmental or interdepartmental orientation or "mental hygiene" courses. Some little experience with such attempts has led the writer to the opinion that these aggregates lack the structure, consistent point of view, and potentialities for con-

¹ Presidential Address, Division on the Teaching of Psychology of the American Psychological Association, Boston, September 8, 1948.

² Foster, R. G., and Wilson, P. O. Columbia University Press, 1942. Pp. 305.

tinuing sound growth and coordination with other curricular offerings which first courses in psychology stressing these same purposes could have. But unless undergraduate offerings in psychology make more effort expressly to meet student needs, such conglomerate courses seem likely to become more common.

It is encouraging in this connection to find the Harvard report on *The Place of Psychology in an Ideal University* declaring that "the contribution a proper development of psychology could make" which "transcends every other aspect of psychology in an ideal university" concerns "the psychological adjustments of individual human beings, the motivations and personality of the student, the variety of student capacities, tastes and temperaments" (p. 13). "For the student in need of knowledge of himself and of guidance, educationally and in his social and occupational relations, adequate instruction in psychological science should prove invaluable" (p. 11). But on page 25 we are told categorically that the first course should "consist of two lecture or demonstration periods and one conference or section meeting"; and the list of "indispensable basic" topics begins with "sensory processes, mechanism of behavior, perception." The most conservative of our colleagues could have no objection! As will be stressed shortly, substantial changes in content, method, and point of view seem needed, if we are to aid students as effectively as we might in a useful understanding of self and associates, and in adjustment.

A second almost-lost professional opportunity is evidenced in another Harvard monograph, far more widely known and far more influential than the one cited above. Psychology appears to have no recognized place in the program presented in *General Education in a Free Society*.³ There is a more express advocacy of the value of Greek (a professor of Greek was on the Committee)! It is understandable that, in these times of international turmoil and conflicting socio-economic ideologies, stress should be put on "Western Thought and Institutions" and their history, and on problems of our society. But is it not indeed Hamlet with Hamlet left out when these problems are treated without careful scientific consideration of the nature of the human beings who compose this society, or the ways in which these strange beings interact in social relationships? It seems indeed unfortunate that a group composed predominantly of men from the social studies shows

little if any recognition of modern psychological work on frustration and aggression, propaganda, scapegoating, or the importance of psychological understanding of such men as Hitler. And are we not at fault that they do not appreciate the importance of scientific study of social phenomena, and of similar study of the individual as the stuff out of which society is made? Might it not be argued that a psychology so oriented should be a basic prerequisite for the social sciences, and a very essential part of an adequate program of general education? And are not such tendencies for lower division and junior college programs to omit systematic study of human nature a serious weakness of these programs—and of the position of our science?

The third almost-lost professional opportunity tends to be neglected in part because now often regarded as an accomplished fact: the tendency, most exemplified in teacher-training, for pre-professional and professional psychological material to be presented elsewhere than in departments of psychology. The Harvard report on *The Place of Psychology in an Ideal University* rightly is distressed by this trend. But it seems largely unaware of its most justifying cause—the top-lofty unwillingness of many departments of psychology to give any real consideration to the needs of professional programs in teacher-education, or commerce, or engineering, or law. Not protest against these trends, but constructive attempts to deal with their causes, is needed.

THREE STEPS FOR RECOVERY OF THESE OPPORTUNITIES

The first step in such attempts should (the writer believes) be a careful consideration of larger objectives. Whatever may be true of graduate work, in undergraduate programs our major objective should not be simply to "teach psychology" according to our own preconceptions. We should be first to recognize and even urge that the major objective of undergraduate education is not information-giving but rather the broad development—not only in intellect but in total personality—of the young people in our schools and colleges. Surely it will then be found that psychology has major contributions to make to the understanding of that development and its furtherance. We should be among the first to recognize that a major objective of general education in our troubled society should be to aid students in understanding that society and its problems. It will surely then be found that psychology has much to contribute to that understanding, and that the prob-

³ Harvard University Press, 1945. Pp. xix + 267.

lems are hardly soluble without consideration of psychological factors. We should recognize that the first objective of professional courses in teacher-education or social administration or law is to make effective teachers or social workers or lawyers. It will surely be discovered that a basic need in all these professions is for a broad functional psychology.

In the second place, we should lead in the application of research methods to the determination of content for the reaching of these objectives. We should urge the value, where relevant, of job analyses, of experimental programs and the careful appraisal of them, in building undergraduate professional programs (as in teacher-education). Such investigation may bring in question the value of some elements in conventional courses in psychology; "sensory processes" may not head the list of "indispensable basic" topics. But it has been the experience of the writer in such work that so many more items, from the total field of our science, are found needed, that the net result is usually an enlargement of our contribution. Similar outcomes may well be expected from application of curriculum-building techniques to problems of "general education." And with reference to the first-mentioned major objective (fostering the total healthy development of young people): should we not have many more investigations such as the volume quoted earlier on the relationships of woman's problems to their educational programs? We might well have broad job-analyses of the total experience and needs involved in being a young person in college, in our present culture! Courses based on such investigations should not only have an increased vitality because composed largely of material known to have relevance to felt needs; far from being mere aggregates of helpful ideas, they can also be vigorously systematic—and structured more in accord with current trends than courses long established. As the Harvard report states, "All the evidence indicates" that psychology is growing "especially in the direction of social psychology, . . . and applied or clinical forms" (p. 41). That is, such an approach need not omit essential systematic treatment of our subject, but even bring that more up to date.

Finally, we should get free from the conventional, in methods of instruction. As indicated in the symposium on that topic which is part of our program, there may be field work off campus, informal socialized laboratory procedures including possibilities of group therapy, subtle group methods giving new insights and competencies regarding social dynamics.

Courses using such methods should have greatly increased potentialities for usefulness in professional training (as for teaching), in education for life in our democracy, in fostering the healthy total development of our undergraduate young people. And the important values in the usual laboratory or discussion course can still be kept. May we hope that any revision of the Harvard report will declare *against* a first course of "two lectures or demonstrations and one section meeting" and instead ask for methods more vital.

THE PLACE OF PSYCHOLOGY IN AN IDEAL UNDERGRADUATE PROGRAM

This paper began with alarm lest "orientation" courses should take over our possible helpfulness to students in self-understanding and adjustment, general education have no room for us in lower division curricula, and psychological contributions to undergraduate professional training be handled apart from us, in the professional colleges. Increasingly psychology might then become only an upper division and graduate subject, like geology or anthropology.

The point of view here urged is indeed different, and should involve very different consequences. For one thing, courses should be given at that point in a curriculum where they are most needed. Surely a first course in psychology seeking to aid students in self-understanding and adjustment should be given when they most need that help—at the beginning of their freshman year. Courses giving understanding regarding human nature in relation to society should come before or with courses in economics or sociology or government or history, rather than after or not at all. Courses in child development and in learning (again to take teacher-training as an example of undergraduate professional curricula) should come before, and serve as essential foundation for, later courses in instructional methods and pupil personnel. If all these values could be realized, psychology should become the most widely useful subject in lower division programs, rendering vital services, not so effectively obtained otherwise. This paper is a plea that we do not let our present preoccupation with certification, the clinical doctorate, needs of the Veterans' Administration, or programs for our comparatively few undergraduate major students, cause neglect of these larger problems of undergraduate instruction.

Received October 11, 1948



C. M. LOUITTIT

Dean, Undergraduate Division, University of Illinois, Galesburg, Illinois
Editor of the Psychological Abstracts

Across the Secretary's Desk

A THOUSAND NEW MEMBERS

As the APA gets larger, so does the problem of reviewing new membership applications. This year there were 1250 to examine. Each one was read by two, and some were read by three, members of the office professional staff. Then they all went to the Board of Directors. Some were so obviously qualified that the Board could approve them in a hurry. Some were so obviously unqualified that they could be rejected equally rapidly. But in between were about 300 doubtful cases. Each of these was studied carefully by two and sometimes by more members of the Board. A few cases were considered by the entire Board. All told, perhaps forty man-days were spent in examining the 1250 applications.

Because of the large amount of time required, the Board no longer plans to devote the time of all its members to this task. Instead, it has agreed that a small group of Board members will serve as a membership committee. This change allows the APA to change the time of election from Spring to Fall. The next deadline for applications will be August 1. Applications will be reviewed late in September. Those elected will become Associates on January 1, 1950. Confusion will be avoided if this new deadline and schedule are announced at clubs for graduate students in psychology and posted on departmental bulletin boards. Department chairmen please note.

As the APA grows in prestige, membership becomes more sought after. We had a lot of evidence of that in the applications. Some came from people who had been qualified for many years but who had never bothered to belong to the APA before. One application was from a college teacher who received his PhD in psychology forty-one years ago. There were also applications from people with little training in psychology but who are now working in fields bordering on the psychological. There were applications from educators, social workers, psychiatrists, philosophers, high school teachers, ministers, lawyers, and from some who claimed interest in graphology, lie detection, or people.

The sheer size of the job and the dangers of admitting unethical and incompetent applicants has gradually forced the Board to establish more and

more specific ground rules for determining an applicant's qualifications. The Board is not trying to change the requirements given in the By-Laws, but it has been forced into stating the requirements in greater detail.

Students who have majored in psychology in graduate school usually present little difficulty. But it is frequently hard to decide on applicants from other fields who claim a year's graduate work in psychology. Such cases, the Board has agreed, must have at least 30 semester hours, or their equivalent, in courses that are essentially psychological in character. Courses in statistics or tests and measurements are counted whether given by a psychology department or an education department. The Board always tries to base its decisions on the nature of the courses rather than on the department which offered them. Because so many problems arise of deciding on what the graduate work did include, the Board now requires a transcript of graduate work from every applicant.

Difficulties also arise in appraising experience. Experience in social work, in employment interviewing, in school teaching, in being an Army personnel clerk was offered by applicants who had had no formal training in psychology at the time the experience was gained. In interpreting the phrase "a year of experience in professional work that is psychological in nature" the Board does not credit experience gained prior to the beginning of graduate work in psychology.

Rules like these help the Board to reach decisions on doubtful cases. But they do not guarantee that no mistakes will be made. The members can help to avoid mistakes by being more careful in making endorsements. Each applicant must be endorsed by two present members. That requirement is an inflexible one. But sometimes it is a weak one. In doubtful cases the Board sometimes asks the endorsers for fuller information. I have received a number of shamefaced replies saying "I don't really know him, but so-and-so asked me to endorse the application" or "I'm sorry that I cannot give you any more information. I met the man only once at a party." In an attempt to avoid such meaningless endorsements the application form now requires the endorser to tell how long he has known the

(continued on page 154)

Comment

Personal Advice over the Radio

To the Editor:

One serious problem facing the profession is that of attempting to curb the airing of radio programs which give advice on personal problems. I think that no trained psychologist can fail to deplore the effect of this sort of program. It is obvious that the effect on the public is injurious, in encouraging persons to apply to themselves advice, often very bad advice, which is given to the client who appears or is discussed on the program. It would seem to be a violation of professional ethics to use personal problems for their entertainment value, to give personal advice in such a way that it might be misapplied by persons for whom it is not intended, and to give such bad advice in the first place.

We can, of course, work toward the encouraging of legislation which will limit this kind of program, just as other professions seem to have done. But that is a slow procedure. We have not yet worked out the problem of limiting the violations of basic professional ethics by means of state licensing.

In the meantime it would seem to the writer that much could be done by individual psychologists by the method of writing letters to the broadcasting systems and to the Federal Communications Commission, protesting this sort of thing. The companies are not insensitive to a vocal protest from a segment of the population; as everyone knows, they are, in fact, constantly polling the public in order to get their sentiments. But again, polling procedures have taught them to ignore most isolated protests; they respond to *volume* of opinion, especially if the opinion appears to be sincere.

I do not think this is a matter of choosing between the procedure of encouraging legislation and that of expressing protest to the companies. There is a need for *both* procedures. Fortunately, the companies are more likely to respond to pressure than are individual violators of ethics in each community. If each member of the APA wrote letters to interested organizations, much of the slow legislative procedure would become unnecessary. I believe we should abandon our individual lethargy about expressing ourselves, clearly and sincerely, when we have a protest. And we could also bring these protests to the directors and committees of the APA for the purpose of encouraging *official* action by this organization.

It seems most important that we recognize that *we* must carry a large share of the responsibility for meeting this sort of problem. We must stop isolating ourselves from problems of everyday life and hoping that an enlightened government will finally get around to

seeing that the public needs protection from the opportunists who want to usurp our field.

WILLIAM U. SNYDER
Pennsylvania State College

State Civil Service Commissions

To the Managing Editor:

When my eye caught the heading, "How to Obtain a Civil Service Position" in the March American Psychologist, I thought I was going to read a treatise on just that. I was dismayed to learn that it referred only to a Civil Service position in one jurisdiction, namely the Federal Government. As a member of the Division of Psychologists in the Public Service, I am interested in methods of recruiting, standards, etc. for *all* psychologists who expect to become civil service employees.

I have no figures at hand as to the number of psychologists in the Federal service as compared to the total in the states, cities and counties, but I believe the latter would account for at least half. After all, the care of the feeble-minded and insane is a state responsibility, and half of our states have complete merit systems.

Even in your footnote to the title, you refer to "the Civil Service Commission" when of course there is no such animal. There are offices of three separate and distinct civil service agencies here in Detroit alone: the Detroit, Wayne County, and the United States Civil Service Commission, and a fourth, the Michigan State Civil Service Commission, 70 miles away, at Lansing. All are competing with each other to recruit psychologists for work in this area.

My only thought in calling this to your attention is that some potential psychologist, say a college senior in a city, state, or county which has psychologists of its own, might be misled by your caption. He will write to Washington because he was told that was "how to obtain a civil service position," when there might be civil service positions within walking distance of his home.

All will be forgiven if you will tell your readers that the Wayne County Civil Service Commission has three classes of psychologists:

Class Title	Salary Range	Minimum Education and Experience Requirements
Psychology Intern	\$2460 (one year)	Major in psychology
Psychologist I	\$3960 to \$4440	Master's degree and one year of experience.
Psychologist II	\$4740 to \$5460	Master's degree and two years' experience.

Interested parties should write to Wayne County Civil Service Commission, 2200 Barlum Tower, Detroit 26, Michigan.

LYNDON BABCOCK
Wayne County Civil Service Commission

Standards for Intern Training

To the Editor:

The Committee on Training in Clinical Psychology would like to bring to the attention of readers of *The American Psychologist* its plans for the formulation of standards for agencies which provide field or "internship" training in clinical psychology. These plans are pursuant to the instructions of the Board of Directors which, at its meeting in March, 1947 directed the Committee to "formulate standards for institutions giving training in clinical psychology, including both universities and internship and other practicum facilities."

The publication in *The American Psychologist* of lists of available internships in psychology does not indicate endorsement by the APA of the standards of experience and training given in the agencies listed; the aim was rather to obtain a more complete list of internships than was given in the Notes and News columns in previous years. The APA will, in time, develop and publish its statement of standards for such agencies.

The first steps in this work are now being undertaken by the Committee. Beginning with the report on "Graduate Internship Training in Psychology", *J. consult. Psychol.*, 1945, 9, 243-266, and the examination of the statements on internship agencies submitted to it by the forty-one universities recently evaluated through visits by the Committee, the Committee is collecting information on a number of other agencies in which students may get supervised experience of a kind to aid in the development of professional competence in clinical psychology.

In the opinion of the Committee, there may be a great variety of agencies which offer invaluable experience and training. While medically centered training, such as is to be found in mental hospitals, is an essential part of the training of a clinical psychologist, the Committee wishes to become more thoroughly informed about the possibilities and advantages of training in community agencies for public welfare or social service, school clinics, courts, reformatories, remedial clinics and rehabilitation centers.

The Committee invites correspondence from all agencies which would assist the Committee in developing standards for the APA by having Dr. Heiser, the Committee Administrative Officer, visit them for study of their facilities as internship training centers.

For the Committee on Training in Clinical Psychology

DAVID SHAKOW, *Chairman*
Illinois Neuropsychiatric Institute

Unauthorized Publication

To the Editor:

The December, 1948 issue of *Magazine Digest* contained an article giving the items and methods for scoring the Northwestern Infant Intelligence Test. The article erroneously implied that the test could be given by any adult without special training. The publication of the article occurred after material concerning the test was submitted to *Magazine Digest* at its own request, with a definite promise on the part of *Magazine Digest* that nothing would be published without the author's "express permission and approval". No such consent was ever given, nor did the author even see the article until it was printed.

A. R. GILLILAND
Northwestern University

Across the Secretary's Desk Continued

(Continued from page 152)

applicant and in what capacity. This second question provided the Board with an amusing relief from the work of reviewing applications. One endorser, explaining in what capacity he had known the applicant, wrote: "She is the wife of my wife's psychoanalyst."

So much for the problem of selecting the successful applicants from the unsuccessful ones. Of the 1250 who applied, 997 were finally elected. That is the largest group of new Associates the APA has ever elected. Together with the 800 elected a year ago, they make up a quarter of the whole APA.

DAEL WOLFFLE

Psychological Notes and News

John W. Gardner was elected vice-president of the Carnegie Corporation of New York. An executive associate of the Corporation since 1946, Mr. Gardner succeeds Mr. Dollard in the vice-presidency which has been vacant since Mr. Dollard became president in June, 1948.

Carl E. Seashore, retired State University of Iowa professor and former dean of the Graduate College, was recently honored with the title "distinguished service professor" which was conferred by the Iowa State Board of Education.

Walter R. Miles of Yale University received on April 2 the Howard Crosby Warren Medal, awarded annually by the Society of Experimental Psychologists for outstanding research work by an American psychologist.

Professor Miles' work on night vision was cited. He developed the red dark-adaptation goggles which, in various forms, were widely used by the American, Canadian, and British armed forces. Later, captured materials showed that the Germans were also making the goggles.

Marion E. Bunch, professor of psychology at the University of Illinois, has been appointed professor and chairman of the department of psychology, Washington University, St. Louis, beginning in the fall.

Lawrence I. O'Kelly of the University of Colorado has been appointed professor of psychology at the University of Illinois, beginning in the fall.

William S. Kogan has been transferred from the Mental Hygiene Clinic of the VA Regional Office at Pittsburgh to the one at Portland. He is now chief clinical psychologist.

Roger W. Russell has been granted a year's leave of absence from the University of Pittsburgh to join the staff of the Institute of Psychiatry, University of London, with the rank of research scholar.

The most time-consuming job of the APA office is to manage the Association's publications. We

edit a journal and an annual directory, handle business details for these two publications and the Association's nine other journals, keep up the subscription lists, and take in money for subscriptions and back orders. The bulk of the daily mail concerns orders, payments, and bills, not psychology.

A symposium on Industrial Relations was held at the University of Buffalo April 22 and 23 under the joint sponsorship of the School of Business Administration and the Department of Psychology.

The annual meeting of the Western Psychological Association is to be held at the University of Oregon, Eugene, June 25 and 26. An invitation to participate is extended to all members of the APA who may be on the west coast this summer. The deadline for abstracts is May 20. Send them to the secretary-treasurer, M. Bruce Fisher, Fresno State College, Fresno, California.

Industrial psychologist, as soon as possible, man, 28 to 40, at least the MA degree with one or more years' industrial experience in interviewing, considerable background of applied psychology, and a year's clinical training. The salary is open. For additional information write to Mr. Dwight M. Dernier, Booz, Allen, and Hamilton, 285 Madison Ave., New York 17, N. Y.

University of Melbourne invites applications for the position of Senior Lecturer in Psychology (general psychology with special emphasis on educational psychology). Salary £650-£850 per annum plus £108 per annum cost-of-living allowance, subject to superannuation contributions. Conditions of appointment and application may be obtained from the Registrar of any university in Australia and New Zealand. Applications should be sent air mail to the Registrar, University of Melbourne, Carlton, N.3, in order to reach him by May 30, 1949.

Cards to secure information for the 1949 APA Directory have been mailed to all members. If you have not already returned your card, please do so at once. It will take only two minutes to fill it out.

Convention Calendar

AMERICAN PSYCHOLOGICAL ASSOCIATION

September 5-10, 1949; Denver, Colorado

For information write to:

Dr. Dael Wolfe, American Psychological Association
1515 Massachusetts Avenue, N. W., Washington 5,
D. C.

WESTERN PSYCHOLOGICAL ASSOCIATION

June 24-25, 1949; Eugene, Oregon

For information write to:

Dr. M. Bruce Fisher, Secretary
Fresno State College,
Fresno 4, California

CANADIAN PSYCHOLOGICAL ASSOCIATION

May 26-28, 1949; Mount Royal Hotel, Montreal

For information write to:

Dr. Gordon H. Turner, Secretary
Canadian Psychological Association
100 St. George Street,
Toronto, Canada

GUIDING HUMAN MISFITS

By ALEXANDRA ADLER, M.D.

*Asst. Clinical Prof. of Neurology, N. Y. U.
College of Medicine*

The author's ideas here set forth, in the light of her own clinical experience, follow closely those which were laid down by her father, Alfred Adler, the founder of individual psychology. She herself has specialized in neurology, psychiatry and psychotherapy, both in America and abroad. It should be helpful to physicians, social workers and teachers, as well as to educated parents and other lay people. \$2.75

THE EMOTIONS: Outline Of A Theory

By JEAN-PAUL SARTRE

Analyzes the roles which fear, lust, melancholy and anguish play in the life of man, and what is the true reality of conscious life. \$2.75

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